CITY OF WOODLAND
GRANT NO. G1200052

NO NET LOSS REPORT

City of Woodland's Shoreline Master Program

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FOR THE CITY OF WOODLAND'S SHORELINE MASTER PROGRAM

1 INTRODUCTION

The Shoreline Management Act guidelines (Guidelines) require local shoreline master programs (SMPs) to regulate new development to "achieve no net loss of ecological function." This No Net Loss (NNL) Report provides a summary of how the development of the SMP and supporting documents, including the Shoreline Analysis Report, Shoreline Restoration Plan, and Cumulative Impacts Analysis, will ensure that ecological functions will not be degraded or minimized over time as the SMP is implemented.

2 SHORELINE JURISDICTION

The City of Woodland is located on the Lewis River northeast of its confluence with the Columbia River. A portion of the City extends into Clark County. The Lewis River has a mean annual flow of greater than 1,000 cfs and is therefore included in a classification of unique shorelines known as Shorelines of Statewide Significance. Horseshoe Lake is located east of the Lewis River at the southern end of the City, and is the only other shoreline waterbody in the City of Woodland.

All aquatic areas, shorelands 200 feet from the ordinary high water mark (OHWM) of the waterbodies mentioned above, and associated wetlands are considered part of shoreline jurisdiction. The City's mapped floodway and lands within 200 feet of the floodway which are still within the 100-year floodplain are also included in shoreline jurisdiction.

The total areas subject to the City's updated SMP, not including aquatic area, is approximately 170 acres (0.27 square miles), and encompasses approximately 3.7 miles (19,500 feet) of shoreline. The City's Urban Growth Area, managed by the Cowlitz County SMP, includes an additional 28 acres (0.04 square miles), and encompasses approximately 2.4 miles (12,700 feet) of shoreline.

3 SHORELINE ENVIRONMENT DESIGNATIONS

The assignment of shoreline designations is an important step in achieving no net loss of ecological function. It can help minimize impacts by concentrating development in lower functioning areas that are not likely to experience significant function degradation with incremental increases in new development or redevelopment.

The Shoreline Analysis Report evaluated existing conditions in the City's shorelines. The inventory of shoreline conditions and evaluation of ecological functions was completed using eight distinct reaches. Assignment of environment designations was based on existing ecological function, existing land use, and anticipated future land use according to the City's Comprehensive Plan and zoning map (Figure 3-1).

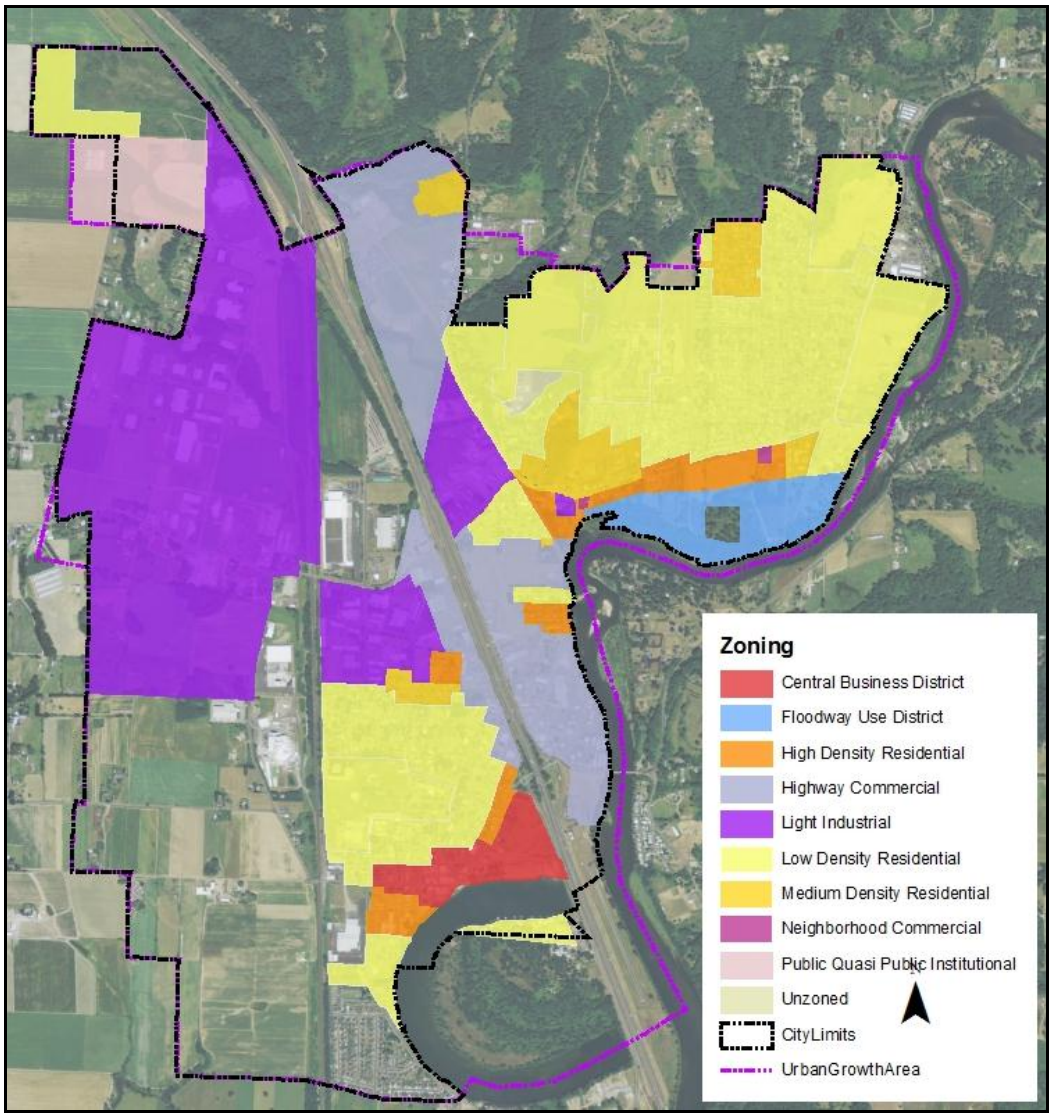

Figure 3-1. City of Woodland zoning map.

The City's proposed SMP establishes four upland environment designations, including High Intensity, Residential, Urban Conservancy, and Recreation, and one Aquatic environment designation for areas waterward of the OHWM (Figure 3-2).

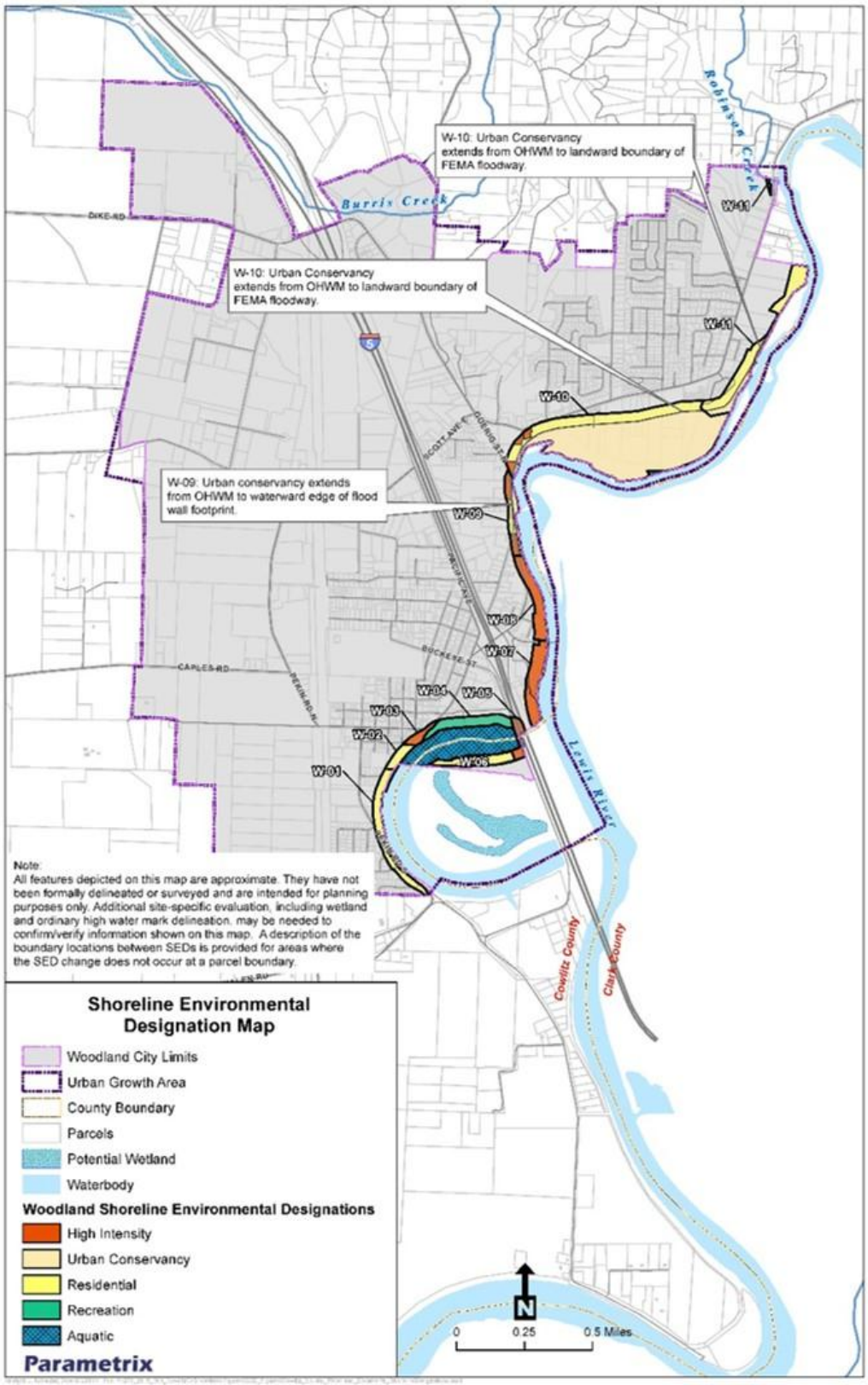

Figure 3-2. City of Woodland Shoreline Environment Designations.

3.1 High Intensity

The High Intensity environment designation is proposed for shoreline areas within the City that currently support or are planned for high-intensity water-oriented uses related to commerce or transportation. According to the proposed SMP, the High Intensity designation is intended to provide areas for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and seeking to restore ecological functions where they are degraded. Management policies emphasize giving priority to water-dependent, water-related, and water-enjoyment uses; providing public access to the shoreline; and minimizing impacts by utilizing existing developed areas before expanding into new areas.

3.2 Residential

The Residential environment designation is proposed for shoreline areas that are planned or platted for or that already support single or multi-family residential development. The Residential designation is intended to accommodate residential development and appurtenant structures. Management policies focus on ensuring that residential development is designed to be compatible with its location, including any environmental limitations as well as the level of existing infrastructure and services.

3.3 Urban Conservancy

The Urban Conservancy environment is proposed for shoreline areas that support or are appropriate or planned for development that is compatible with maintaining or restoring ecological functions. These are shoreline areas that are not generally suitable for water-dependent uses and may feature open space, floodplains, or other areas that are environmentally sensitive and/or provide the potential for ecological restoration. The Urban Conservancy designation is intended to protect and restore ecological functions of open space, floodplains, and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses. Management polices focus on ensuring priority for water-oriented uses and achieving no net loss of ecological functions.

3.4 Recreation

The Recreation environment designation is proposed for shoreline areas where public and private lands support or are zoned for recreation use, including parks, open space, and water-dependent uses which provide recreational moorage. The Recreation designation is intended to provide areas for new and continued recreation and public access opportunities. An additional purpose is to maintain existing ecological functions and open space. Management policies

focus on developing recreational uses that are widely usable and promote ecological stewardship.

4 POLICIES AND REGULATIONS

The Shoreline Analysis Report evaluated existing conditions, with particular attention to ecological conditions, in the City's shorelines. The overarching purpose of recording baseline conditions is to ensure that the adopted regulations achieve no net loss of shoreline ecological function. The report includes recommendations for translating findings into shoreline designations, SMP policies and regulations, and restoration strategies. Key recommendations for SMP policies and regulations related to no net loss goals are presented in Tables 4-1 through 4-3, with a brief description of how those recommendations are addressed in the proposed SMP.

Table 4-1. Implementation of key Shoreline Analysis Report general policy and regulation recommendations related to no net loss.

Report Recommendation Summary	Recommendation Implementation
Critical Areas	
Review critical areas regulations to assess if they provide a level of protection of critical areas at least equal to the City's critical areas ordinance.	Critical areas in shoreline jurisdiction are designated and regulated under SMP Appendix B. Provisions for all critical areas address ecological functions and require mitigation sequencing.
Review and update designation, rating, and classification methods for FWHCAs.	FWHCAs are designated in Appendix B(9.)(A.) and include waters of the state. Appendix B(9.)(C.) adopts the Washington Department of Natural Resources official water type reference maps.
Revise the existing fish and wildlife habitat conservation area (FWHCA) buffers to be based on reach-specific ecological conditions.	Appendix B Table B-4 assigns reach-specific buffers to Type S waters. These buffers are based on existing ecological conditions, and range from 0 (on Horseshoe Lake recreation shorelines) to 150 feet on vegetated high-intensity shorelines of Lewis River.
Revise wetland exemptions to be based on function rather than size, and to require after-the-fact mitigation in the	Updated wetland provisions have removed these exemptions and instead specify requirements for activities in

Report Recommendation Summary	Recommendation Implementation
case of emergency impacts.	wetlands (Appendix B(5.4)).
Revise wetland buffer regulations to be based on habitat functions.	Appendix B adopts the wetland buffer regulations recommended in Ecology's guidance for small cities (October 2012, updated December 2014).
Update wetland classification methods per Ecology guidance.	Appendix B adopts the rating methodology set forth in Ecology's *Washington State Wetland Rating System for Western Washington: 2014 Update*.
Update land use intensity definitions to increase buffer functionality.	The adopted buffer regulations vary based on land use intensity, and are wider for higher intensity land uses.
Flood Hazard Reduction	
Review and update provisions to address direction in WAC 173-26-221(3) to preserve the dynamic physical processes of rivers, including preservation of floodplains. Separate flood hazard reduction regulations from other shoreline stabilization regulations; emphasize maintaining existing ecological functions through no net loss criteria while providing flexibility for developing and maintaining existing uses.	Section 6.4 of the proposed SMP includes provisions that: prohibit new development that would require new flood control structures in the CMZ or floodway; require mitigation sequencing for new flood control works; and require that flood control works are located and designed to protect and restore natural floodway functions. A habitat assessment is required for development within a flood hazard area.
Shoreline Vegetation and Conservation	
Build on the critical areas protections, paying special attention to measures that will promote retention of shoreline vegetation and development of a well-functioning shoreline.	Section 6.6 of the proposed SMP, Vegetation Conservation, requires that all new development minimize vegetation removal to the amount necessary. Vegetated buffers are required to protect and maintain shoreline vegetation (Table 7-1 and Appendix B).
Include clear standards for fill, grading, and excavation by environment designation.	Table 7-1 designates fill and excavation as permitted, conditionally permitted, or prohibited modifications by environment designation. Section 7.3.3 contains regulations specific to fill and excavation.
Ensure that vegetation standards are	Section 2, Definitions, provides

Report Recommendation Summary	Recommendation Implementation
clear regarding thinning, trimming, and pruning of nearshore vegetation to maintain views and minimize safety hazards.	definitions of "significant vegetation removal" and "clearing" that clearly exclude landscape maintenance or pruning, consistent with accepted horticultural practices, where it does not affect ecological functions.
Water Quality, Stormwater, and Nonpoint Pollution	
Consider incorporating regulations to facilitate maximum implementation of TMDL plans and controlling introductions of 303(d)-listed pollutants.	Considered and not included in the proposed SMP.
Ensure that regulations allow for placement of water quality improvement-related structures or facilities.	Section 6.7, Water Quality and Quantity, provides regulations for stormwater and sewage management structures.
Consider adding clarifying statements noting that the policies of the SMP will also be policies of the City's comprehensive plan, and that the policies also apply to activities outside of shoreline jurisdiction that affect water quality within shoreline jurisdiction.	SMP Section 1.4(E.) states that the policies and regulations established by the SMP will be integrated and coordinated with those of the Woodland Comprehensive Plan and development regulations.

Table 4-2. Implementation of key Shoreline Analysis Report shoreline modification recommendations related to no net loss.

Report Recommendation Summary	Recommendation Implementation
Shoreline Stabilization	
Separate shoreline armoring structures from regulations pertaining to breakwaters, jetties, groins, and weirs.	The proposed SMP contains regulations for shoreline stabilization in Section 7.3.1 and regulations for breakwaters and groins in Section 7.3.2.
Give preference to those types of shoreline modifications that have a lesser impact on ecological functions, promoting "soft" over "hard" measures.	Section 4.10.2(B.)(2.) reads, "Types of shoreline stabilization that have a lesser impact on ecological functions are preferred." Section 7.3.1(D.) defines a hierarchy of preference for permitting new or expanded shoreline stabilization.

Report Recommendation Summary	Recommendation Implementation
Ensure "replacement" and "repair" definitions, standards, and thresholds are consistent with WAC 173-26-231(3)(a).	Section 7.3.1(L.) defines "replacement" consistent with the WAC.
Consider inclusion of incentives to encourage modification of existing armoring to improve habitat.	Not explicitly included.
Piers and Docks	
Develop detailed dimensional and material standards for new and replacement/modified piers and docks, customized for river and lake environments. Be consistent, to the extent practicable, with WDFW, WDNR, and Corps design standards.	Section 7.2.3(D.) includes dimensional standards for new piers and docks that are consistent with state and federal standards.
Emphasize joint-use or community piers and docks over single-use structures.	Section 7.2.3(E.)(1.) allows new moorage structures to serve a single-family residence only when a shared structure is not available, and there is no entity capable of developing one. Section 7.2.3(E.)(3.) requires that new residential development of two or more dwellings with new accessory docks provide joint use or community dock facilities.
Regulate according to environment designation, with a focus on protecting ecological functions in conservancy and natural designations.	Table 7-1 prohibits all boating facilities in the Residential environment.
Fill	
Encourage restoration fills.	Section 7.3.3 and Table 7-1 permit fill below the OHWM for ecological restoration; all other uses require a conditional use permit.
Prohibit fills waterward of the OHWM, and allow fills landward of the OHWM only when they result in no net loss.	Consistent with WAC 173-26-231(3)(c), fill waterward of the OHWM is permitted only to support a water-dependent use, public access, cleanup and disposal of contaminated sediments, restoration, or expansion of transportation facilities of statewide

Report Recommendation Summary	Recommendation Implementation
	significance (SMP Section 7.3.3(B.)).
Breakwaters, Jetties, Groins and Weirs	
Consider prohibiting new breakwaters, jetties, groins, and weirs except where essential to restoration or maintenance of existing water-dependent uses.	Per SMP 7.3.2(A.), permitted through a SCUP only where necessary to support water-dependent uses, public access, shoreline stabilization, public safety, or other specific public purpose. For restoration, permitted through an SSDP.
Dredging and Dredge Material Disposal	
Allow continued dredging on the as part of a master program.	Section 7.3.4(A.) requires that dredging be approved by state and federal agencies with jurisdiction.
Shoreline Habitat and Natural Systems Enhancement Projects	
Consider incentives to encourage restoration projects.	Section 4.3.2 includes a policy to facilitate the projects described in the Shoreline Restoration Plan. Restoration projects are permitted in all environment designations (SMP Table 7-1).

Table 4-3. Implementation of key Shoreline Analysis Report shoreline use recommendations related to no net loss.

Report Recommendation Summary	Recommendation Implementation
Aquaculture	
Differentiate between commercial aquaculture and species restoration aquaculture.	Per SMP 7.2.2, new aquaculture uses may be permitted only in associated with the restoration of a native fish species in the Lewis River.
Boating Facilities	
Consider requirements for demand analysis for new marinas as a means to minimize cumulative impacts from multiple facilities.	Per SMP 7.2.3(D.)(2.), new non-single-family residential dock construction shall only be permitted with a needs analysis or comprehensive master plan projecting future needs for dock or moorage space.

Report Recommendation Summary	Recommendation Implementation
Commercial Development	
Make provisions for the public access and ecological restoration requirements for non-water-dependent uses for those areas where water-dependent uses are not practical. Consider provisions for mitigation banking.	Per SMP 7.2.4(C.), non-water-oriented commercial development may be permitted only when part of a mixed use project or navigability is severely limited and the development provides a significant public benefit with respect to the SMA, such as public access and ecological restoration.
Forest Practices	
Include specific limits on clear-cutting provided in RCW 90.58.150.	SMP Section 7.2.5(C.) limits timber cutting within shoreline jurisdiction to 30 percent of the merchantable trees in any ten-year period.
Industry	
Make provisions for the public access and ecological restoration requirements for non-water-dependent uses for those areas where water-dependent uses are not practical. Consider provisions for mitigation banking.	Per SMP 7.2.6(C.), non-water-oriented industrial development may be permitted only when part of a mixed use project or navigability is severely limited and the development provides a significant public benefit with respect to the SMA, such as public access and ecological restoration.
In-stream Structural Uses	
Allow existing in-stream structural uses while ensuring continued protection and preservation of ecosystem functions. Consider distinguishing appropriate areas for in-stream structures based on environment designation or ecological conditions.	Proposed SMP includes a regulatory section (7.2.8) dedicated to in-stream structures, which requires a hydraulic analysis and habitat management plan for applications for new or permanent expansion of in-stream structural uses.
Mining	
Provide policies and regulations according to SMP Guidelines, differentiating between upland and aquatic mining.	Section 7.2.9 of the SMP provides regulations for mining in accordance with the WAC. Subsection (C.) provides regulations specific to mining waterward of the OHWM.
Recreational Development	
Protect and enhance existing natural parks.	Section 4.7.2 of the proposed SMP includes several policies aimed at

Report Recommendation Summary	Recommendation Implementation
	protection and enhancement of shoreline recreation areas.
Distinguish appropriate intensities of recreation uses based on environment designation.	Table 7-1 designates recreational uses as permitted, conditionally permitted, or prohibited by environment designation. Non-water-oriented recreational uses are prohibited in the Urban Conservancy and Aquatic environment.
Residential Development	
Incorporate clear dimensional criteria, including setbacks/buffers, lot coverage, height limits, etc. Recognize existing development patterns and ecological functions in developing these criteria.	SMP Table 7-1 defines dimensional standards, including buffers, building setbacks, maximum height, and maximum river frontage for all environment designations. Environment designations were assigned based on existing and future development patterns and ecological functions.
Require that new development, including lot subdivision, not require new shoreline stabilization.	Section 7.2.11(D.)(1.) requires that new residential development, including subdivisions, short plats, new appurtenances, and accessory uses and structures, be designed such that no new structural stabilization measures are necessary for the life of the structure.
Although single-family residential development is a shoreline preferred use, include provisions to ensure it meets the no-net-loss standard.	Section 6.1(A.) states that all shoreline use and development, including preferred uses and uses that are exempt from permit requirements, be located, designed, constructed, conducted, and maintained in a manner that maintains shoreline ecological functions in accordance with the mitigation sequencing provisions contained in subsection (E.) of the same section.
Transportation and Parking	
Ensure that location of new roads and parking areas considers location outside of shoreline jurisdiction. Provide standards for necessary new roads and parking areas where locations outside of	Section 7.2.12(A.)(1.) requires that all new or expanded non-water-dependent surface transportation facilities be located outside of shoreline jurisdiction unless infeasible. The remainder of the section

Report Recommendation Summary	Recommendation Implementation
shoreline jurisdiction are not feasible.	contains standards to ensure that transportation facilities, including roads, railroads, bridges, non-motorized facilities, and parking, be located, designed, and operated to ensure no net loss of ecological function.
Utilities	
Ensure that location of new utilities considers location outside of shoreline jurisdiction. Provide standards for necessary new utilities where locations outside of shoreline jurisdiction are not feasible.	Section 7.2.13(A.) requires that all new or expanded non-water-dependent utilities be located outside of shoreline jurisdiction unless such a location is demonstrated to be infeasible. The remainder of the section contains standards to ensure that utilities in shoreline jurisdiction be located, designed, and operated to ensure no net loss of ecological function.

5 RESTORATION OPPORTUNITIES

The Shoreline Restoration Plan prepared as part of the SMP update will serve as a valuable resource for the City and its restoration partners to improve impaired ecological functions on the City's shorelines. The plan was developed as part of the larger Cowlitz County-wide SMP update process, and provides a framework for restoration on all County shorelines, including the cities of Castle Rock, Kalama, Kelso, and Woodland. Restoration goals were developed from the County and City comprehensive plans and SMPs.

The plan focuses on restoration projects that are reasonably likely to occur in the foreseeable future. Potential restoration opportunities were identified based on recommendations in existing restoration planning documents, including the 2010 Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan, the Salmon and Steelhead Limiting Factors Reports, Habitat Work Schedule; as well as input from County and City staff and restoration partners. Opportunities include both restoration and protection strategies.

Within the City of Woodland, the areas zoned for floodway along the Lewis River provide opportunities for restoration. These areas provide the most densely vegetated shoreline in the City, and also provide some of the highest hydrologic functions in the City. Floodway areas south of the CC Street Bridge have significant invasive species coverage and impacts from informal camping,

and could be improved through restoration of native vegetation. The Shoreline Restoration Plan identifies and maps three site-specific restoration opportunities, including two within the floodway and one at Horseshoe Lake Park.

The plan provides an implementation framework for these opportunities by identifying existing and ongoing plans and programs as well as potential restoration partners at the federal, state, regional, and local levels. A study completed in 2000 evaluated the City's flood hazard and drainage issues and identified recommended solutions. Study goals relevant to restoration and protection included maintaining good water quality, preserving sensitive resources, and developing a continuous and comprehensive program for managing surface water. The study recommended capital improvement projects to improve structural stormwater drainage issues.

6 CUMULATIVE IMPACTS

The Cumulative Impacts Analysis evaluated the effects of foreseeable development under the proposed SMP and demonstrated that the goals, policies and regulations in the proposed SMP, combined with recommendations in the Shoreline Restoration Plan, will prevent degradation of ecological functions relative to the existing conditions, as documented in the City's Shoreline Analysis Report.

The Cumulative Impacts Analysis determined that the proposed SMP provides a high level of protection to shoreline ecological functions. The report indicated that on its own, the proposed SMP, which includes the Shoreline Restoration Plan, is expected to protect and improve shorelines within the City of Woodland while accommodating limited amount of reasonably foreseeable future shoreline development, resulting in no net loss of shoreline ecological function.

Emphasis is placed on achieving no net loss of ecological function throughout the SMP, with all uses and modifications subject to general and/or specific standards addressing the preservation of water quality, water quantity, and habitat function in the shoreline, as well as basin-wide ecological processes. The following are some of the key features identified in the Cumulative Impacts Analysis that protect and enhance shoreline ecological functions to ensure that the no net loss standard is met.

- Shoreline environment designations were informed by the results of the Shoreline Analysis Report, and shoreline uses and modifications individually determined to be permitted or prohibited in each

designation. Environment designations considered existing and planned land uses as well as existing ecological conditions.

- General requirements of all shoreline uses and developments, including impact avoidance and minimization; criteria for locating structures and utilities; mitigation requirements; vegetation conservation standards; and critical areas regulations in the SMP are designed to achieve no net loss.

- Shoreline use and modification regulations emphasize minimization of structure size, and selection of location and materials that do not degrade and may even enhance shoreline functions.

- Shoreline uses were individually determined to be permitted, conditionally permitted, or prohibited in each environment designation. The most uses are allowed in areas with the highest level of existing disturbance, and uses incompatible with existing land use or ecological conditions are prohibited.

7 Conclusions Regarding No Net Loss

The SMP update process has provided the opportunity to identify existing environmental conditions, anticipate future impacts to shoreline functions, and identify restoration opportunities within the City of Woodland's shoreline jurisdiction. The Shoreline Analysis Report enabled the SMP update process to rely on current, comprehensive information on the shoreline environment. The Cumulative Impacts Analysis evaluated the effects of reasonably foreseeable development that may occur under the draft SMP. The Shoreline Restoration Plan identified planned actions and other opportunities to improve impaired ecological function in the County's shorelines. These elements facilitated the development of regulations that directly and fully consider the preservation of ecological functions in order to achieve no net loss.

Major elements of the SMP that ensure no net loss of ecological functions include: 1) shoreline designations; 2) general provisions; 3) shoreline use and modification provisions; and 4) the Shoreline Restoration Plan. Each of these elements were subject to an analysis of potential ecological impacts and developed with the goal of achieving no net loss of function and improving shoreline function where the opportunity exists.

Given the above, implementation of the proposed SMP is anticipated to achieve no net loss of shoreline ecological functions in the City of Woodland.